

UNCLASSIFIED

Exhibit R-2 FY 2001 RDT&E,N BUDGET ITEM JUSTIFICATION

DATE: Feb 2000

BUDGET ACTIVITY: 5 PROGRAM ELEMENT: 0604784N PROJECT NUMBER: X1300
PROGRAM ELEMENT TITLE: Distributed Surveillance System PROJECT TITLE: Advanced Deployable System

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1999 ACTUAL	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
Advanced Deployable System X1300	47,075	36,707	20,710	34,231	32,943	26,823	43,519	37,013	430,115
Total	47,075	36,707	20,710	34,231	32,943	26,823	43,519	37,013	430,115

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Advanced Deployable System (ADS) is an undersea surveillance system composed of distributed sensors that can be rapidly and unobtrusively deployed in regional contingency areas for use against enemy submarines and in support of littoral warfare. It is designed to detect and track modern diesel electric and nuclear submarines, as well as provide the capability for tracking surface ships and detecting sea minelaying. ADS possesses great flexibility with respect to laydown options, ranging from single barrier to large area fields. It has built upon test experience with distributed sensor fields in shallow noisy water, and used collected data for processing verification. ADS utilizes conventional acoustic sensors and will incorporate All-Optical technology as a secondary developmental effort. ADS incorporates processing technologies and advanced sensors and technologies from other related programs.

1. (U) FY 1999 ACCOMPLISHMENTS:

- (U) (\$22,815) Complete multi-node UWS development, assembly, and integration. Integrate UWS with PAS and conduct test readiness review. Conduct MNT and FET. Analyze MNT and FET data and perform system performance assessment.
- (U) (\$4,595) Analyze data collected during MNT and FET and support any additional development and/or operational testing. Conduct Operational Assessment (OT-1B).
- (U) (\$10,182) Conduct and complete the AOA. Participate in Navy exercises using ADS arrays to collect target data. Support MNT and FET performance analysis. Develop all ILS products, plans and documents to support Milestone II decision.

R-1 Shopping List – Item No Page 126-1 of 126-10

Exhibit R-2,RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2 FY 2001 RDT&E,N BUDGET ITEM JUSTIFICATION

DATE: Feb 2000

BUDGET ACTIVITY: 5 PROGRAM ELEMENT: 0604784N PROJECT NUMBER: X1300
PROGRAM ELEMENT TITLE: Distributed Surveillance System PROJECT TITLE: Advanced Deployable System

- (U) (\$1,813) Continue to manage ADS program through monitoring of contractor and government technical, schedules, and cost performance. Complete MS II program documentation requirements and conduct MS II review. Initiate EMD Contract definition.
- (U) (\$3,835) Initiate development of data fusion algorithms associated with tracking surface shipping required in ADS's Phase I exit criteria.
- (U) (\$3,835) Conduct AODS design verification tests. Conduct design studies and system architectural tradeoffs for advanced remotely-powered AODS variant. Perform feasibility test and in-water demonstration of Platform F delivery capability of AODS.

2. (U) FY 2000 PLAN:

- (U) (\$26,998) Initiate engineering and manufacturing development. Initiate manufacturing technology /cost reduction engineering analysis and process design for array assembly and integration. Initiate engineering development of installation subsystem. Incorporate lessons learned from FET into PAS. Perform Design trade studies for EMD. Conduct Platform B deployment demonstration. Build and test all optical array. Design and test low cost sensor (Smart Work Initiative). Continue to update all Logistics documentation incorporating PB-AODS material in support of a PB-AODS Independent Logistics Assessment (ILA) and the MS II Decision. Initiate long lead planning for manpower, personnel, training, spares, and support equipment.
- (U) (\$2,709) Continue EDM contract definition. Manage ADS through monitoring of contractor and government technical, schedule, and cost performance. Participate in common efforts for DII COE Display, IUSS Systems Engineering, C4I initiatives, and IUSS Common processor.
- (U) (\$7,000) In order to support Web Centric Warfare, continue process development efforts at Orincon in field automation, event detection algorithm development and C4I. Support definition and integration of ADS requirement into NCAP.

3. (U) FY 2001 PLAN:

R-1 Shopping List – Item No Page 126-2 of 126-10

Exhibit R-2,RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2 FY 2001 RDT&E,N BUDGET ITEM JUSTIFICATION

DATE: Feb 2000

BUDGET ACTIVITY: 5 PROGRAM ELEMENT: 0604784N PROJECT NUMBER: X1300
PROGRAM ELEMENT TITLE: Distributed Surveillance System PROJECT TITLE: Advanced Deployable System

- (U) (\$16,100) Continue engineering and manufacturing development and further develop the burial installation method. Continue manufacturing technology /cost reduction engineering analysis and process design for array assembly and integration.
- (U) (\$3,910) Continue to conduct system engineering analysis of array design options for P³I program. Initiate development of Logistics Management Information.
- (U) (\$700) Conduct integrated baseline review for EMD contract effort and award EMD contract. Manage ADS through monitoring of contractor and government technical, schedule, and cost performance.

R-1 Shopping List – Item No Page 126-3 of 126-10

Exhibit R-2,RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2 FY 2001 RDT&E,N BUDGET ITEM JUSTIFICATION

DATE: Feb 2000

BUDGET ACTIVITY: 5 PROGRAM ELEMENT: 0604784N PROJECT NUMBER: X1300
PROGRAM ELEMENT TITLE: Distributed Surveillance System PROJECT TITLE: Advanced Deployable System

B. (U) PROGRAM CHANGE SUMMARY:

(U) Schedule: FY99 Reflects Congressional decrease associated with economic assumptions (-190), SBIR (-863), LOCO GPIS (-295), Miscellaneous Departmental Adjustments (-432) FY00: Reflects Congressional add for Advanced Deployable Systems (ADS) acceleration (22,000) and Congressional reduction (-203), Portion of extramural program is reserved for Small Business Innovation Research assessment in accordance with 15 USC 638 (627) . FY01: Reflects Miscellaneous Departmental Adjustments (-204).

B. (U) OTHER PROGRAM FUNDING SUMMARY: (Dollars in Thousands)

	FY 1999 <u>ESTIMATE</u>	FY2005 <u>ESTIMATE</u>	TO <u>COMPLETE</u>	TOTAL <u>PROGRAM</u>
OPN# 2221	N/A	43,847	CONT	CONT

(U) RELATED RDT&E: Not applicable.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2 FY 2001 RDT&E,N BUDGET ITEM JUSTIFICATION

DATE: Feb 2000

BUDGET ACTIVITY: 5 PROGRAM ELEMENT: 0604784N PROJECT NUMBER: X1300
PROGRAM ELEMENT TITLE: Distributed Surveillance System PROJECT TITLE: Advanced Deployable System

D. (U) ACQUISITION STRATEGY:

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Program Milestones	MS II 4 th Qtr		
Engineering Milestones	Deliver Prototype 2 nd Qtr		
T&E Milestones	MNT 2nd Qtr FET 2 nd -3 rd Qtr OT-1B 2 nd -3 rd Qtr		
Contract Milestones	Start EMD Contract Def	Continue EMD Contract Def 1 st Qtr	EMD IBR 2 nd Qtr Award Contract 2 nd Qtr

- (U) SCHEDULE PROFILE:
See paragraph D above.

R-1 Shopping List – Item No Page 126-5 of 126-10

Exhibit R-2,RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3 FY 2001 RDT&E,N PROJECT COST ANALYSIS

DATE: Feb 2000

BUDGET ACTIVITY: 5 PROGRAM ELEMENT: 0604784N PROJECT NUMBER: X1300
PROGRAM ELEMENT TITLE: Distributed Surveillance System PROJECT TITLE: Advanced Deployable System

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
a. Prime Mission Product	22,815	11,204	16,100
b. Program Management	1,813	2,709	100
c. System Engineering /ILS	10,182	14,497	3,910
d. Test & Evaluation	4,595	1,297	600
e. ADS AODS (X2445)	3,835	0	0
f. ADS Automation and Data Fusion (X2652)	3,835	0	0
g. Orincon		7,000	
Total	47,075	36,707	20,710

UNCLASSIFIED

UNCLASSIFIED

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

Exhibit R-3 Cost Analysis (Page 1)												
APPROPRIATION/BUDGET ACTIVITY: RDT&E,N / BA 5							PROGRAM ELEMENT: 0604784N					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total FY98 & Prior Cost	FY99 Cost	Award Date	FY00 Cost	Award Date	FY01 Cost	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prime Mission Product Development	C/CPAF	LMFS Manassas, VA	52,880	20,708	9/95	11,990	9/95				85,578	85,578
Prime Mission Product Development	C/CPAF	TBD						10,700		50,300	61,000	61,000
Government Engineering Support	WX	SSC-San Diego San Diego, CA	21,000	5,188		4,524	10/99	2,100		6,376	39,188	
Engineering Supt Services	C/CPFF	AHA Rockville, MD	2,000	900	10/98	100	10/99				3,000	3,000
Engineering Supt Services	SS/CPFF	APL/JHU Laurel, MD	2,455	1,120	10/97	463	10/99				4,038	4,038
Engineering Supt Services	SS/CPFF	ARL/UT Austin, TX	3,548	1,300	10/98	899	10/99	900		4,301	10,948	10,948
Software Development	C/CPFF	DSR Fairfax, VA	2,050	1,500	10/98						3,550	3,550
Software Development	C/CPFF	Orincon San Diego, CA		4,420	3/99	5,580	10/99				10,000	10,000
Software Development		TBD						2,500		28,200	30,700	30,700
OTHER CONTRACTS			5,613	1,116		3,250	¹	300		1,100	11,379	¹
OTHER ACTIVITIES			14,431	2,546		6,156	10/99	2,710		16,557	42,400	
Subtotal Product Development			103,977	38,798		32,962		19,210		106,834	301,781	
Remarks:												
1) Various contracts with different award dates and total cost values.												

UNCLASSIFIED

UNCLASSIFIED

B.(U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

Exhibit R-3 Cost Analysis (Page 2)												
APPROPRIATION/BUDGET ACTIVITY: RDT&E,N / BA 5					PROGRAM ELEMENT: 0604784N							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total FY98 & Prior Cost	FY99 Cost	Award Date	FY00 Cost	Award Date	FY01 Cost	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	AMRON San Diego, CA	1,417	470	9/98	140	10/99				2,027	8,233
Government Engineering Support	WX	SSC-San Diego San Diego, CA	6,174	550	10/98	326	10/99				7,050	
		OTHER CONTRACTS	11,702	638	¹	451	¹	900	¹	5,500	19,191	¹
		OTHER ACTIVITIES	353	467	10/98			100	10/00	57,395	58,315	
Subtotal Support			19,646	2,125		917		1,000		62,895	86,583	
Remarks:												
1) Various contracts with different award dates and total cost values.												

UNCLASSIFIED

UNCLASSIFIED

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

Exhibit R-3 Cost Analysis (Page 3)												
APPROPRIATION/BUDGET ACTIVITY: RDT&E,N / BA 5		PROGRAM ELEMENT: 0604784N										
Cost Categories	Contract Method & Type	Performing Activity & Location	Total FY998& Prior Cost	FY99 Cost	Award Date	FY00 Cost	Award Date	FY01 Cost	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test and Evaluation		OTHER CONTRACTS	6,233	811	¹	1,096	¹		¹	500	8,640	¹
Developmental and Operational Test and Evaluation	WX	SSC-San Diego San Diego, CA	7,291	2,996	10/98	411	10/99	400			11,098	
Developmental and Operational Test and Evaluation		OTHER ACTIVITIES	3,871	787	10/98					3,300	7,958	
Subtotal T&E			17,395	4,594		1,507		400		3,800	27,696	
Remarks: 1) Various contracts with different award dates and total cost values.												

UNCLASSIFIED

UNCLASSIFIED

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

Exhibit R-3 Cost Analysis (Page 4)												
APPROPRIATION/BUDGET ACTIVITY: RDT&E,N / BA 5			PROGRAM ELEMENT: 0604784N									
Cost Categories	Contract Method & Type	Performing Activity & Location	Total FY98 & Prior Cost	FY99 Cost	Award Date	FY00 Cost	Award Date	FY01 Cost	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	AMRON San Diego, CA	4,407	870	9/98	665	10/99				5,942	8,233
Program Management Support		OTHER CONTRACTS	4,578	263	¹	210	¹				5,051	¹
Program Management Support		OTHER ACTIVITIES	1,091	425	10/98	446	10/99	100	10/00	1,000	3,062	¹
Subtotal Management			10,076	1,558		1,321		100		1,000	14,055	
Total Cost			151,094	47,075		36,707		20,710		174,529	430,115	
Remarks:												
1) Various contracts with different award dates and total cost values.												

UNCLASSIFIED